

## HEWLETT-PACKARD COMPANY

Legal Department, 20BN  
P.O. Box 10301  
Palo Alto, California 94303-0890

PATENT APPLICATION

ATTORNEY DOCKET NO. 10980134-1

IN THE U.S. PATENT AND TRADEMARK OFFICE  
Patent Application Transmittal Letter

ASSISTANT COMMISSIONER FOR PATENTS  
Washington, D.C. 20231

Sir:

Transmitted herewith for filing under 37 CFR 1.53(b) is a(n): ☒ Utility ☐ Design

☒ original patent application,  
☐ continuation-in-part application

INVENTOR(S): Steven L Webb et al

TITLE: Method And Apparatus For Improving A Progress Monitor During A Long Computer Process

Enclosed are:

- ☒ The Declaration and Power of Attorney. ☒ signed ☐ unsigned or partially signed  
☒ 3 sheets of drawings (one set)  
☐ Information Disclosure Statement and Form PTO-1449 ☐ Associate Power of Attorney  
☐ Priority document(s) ☐ (Other) \_\_\_\_\_ (fee \$ \_\_\_\_\_)

CLAIMS AS FILED BY OTHER THAN A SMALL ENTITY				
(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) TOTALS
TOTAL CLAIMS	10 — 20	0	X \$ 18	\$ 0
INDEPENDENT CLAIMS	2 — 3	0	X \$ 78	\$ 0
ANY MULTIPLE DEPENDENT CLAIMS	0		\$ 260	\$ 0
BASIC FEE: Design ( \$310.00 ); Utility ( \$760.00 )				\$ 760
TOTAL FILING FEE				\$ 760
OTHER FEES				\$
TOTAL CHARGES TO DEPOSIT ACCOUNT				\$ 760

Charge \$ 760 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16, 1.17, 1.19, 1.20 and 1.21. A duplicate copy of this sheet is enclosed.

"Express Mail" label no. EL 125 812 144 USDate of Deposit Jan 20, 1999

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

By

Typed Name: Kimberly D. Taylor

Respectfully submitted,

Steven L Webb et al

By

Steven L Webb

Attorney/Agent for Applicant(s)

Reg. No. P44,395

Date: Jan 20, 1999

Telephone No.: (970) 898-7745

**METHOD AND APPARATUS FOR IMPROVING  
A PROGRESS MONITOR DURING  
A LONG COMPUTER PROCESS**

5

**FIELD OF THE INVENTION**

The present invention relates generally to the field of computers and more particularly to a system and method that makes the time required for a computer process seem to go by more quickly.

10

**BACKGROUND OF THE INVENTION**

Optical scanners are used to capture and digitize images. For example, an optical scanner can be used to capture the image of printed matter on a sheet of paper. The digitized image can then be electronically stored and/or processed with character recognition software to produce ASCII text. Most optical scanners use illumination and optical systems to illuminate the object and focus a small area of the illuminated object, usually referred to as a "scan line," onto the photosensor array. The entire object is then scanned by sweeping the illuminated scan line across the entire object, either by moving the object with respect to the illumination and optical assemblies or by moving the illumination and optical assemblies relative to the object.

Currently, optical character recognition (OCR) requires 300 ppi-sampling rates for accurate results. Thus, a 300 ppi 4 bit gray scan (8.5 X 11), is approximately 4.2 Megabytes of data. A scanner that has an exposure time of 5 milliseconds will take about 16.5 seconds to scan an 8.5 X 11 inch page at 300 ppi. This scan time can be only part of the time required for the total process to be completed. The OCR process takes time as well as saving the data onto the hard disk of the host computer. The total time for a scan can range from 10 to 20 seconds up to over a minute

depending on the type of scan, the speed of the host computer, and the amount of post processing done on the scanned data. During these processes the scanning or OCR software on the host computer usually displays a progress monitor or progress dialog box.

5           A progress monitor or progress dialog box is typically a small rectangular area on the screen that includes a title and a long rectangular area (the progress bar) that shows how much of the process is complete. The title is typically a description of the process. For example, "scanning the page" or "converting to text." The progress bar shows the progress by "filling" the area with a different shade or color. Thus, when  
10   the process is one third done the progress bar will be one third of one color or shade, and two thirds of the original color or shade. When the progress bar has filled or completely changed colors or shades it is an indication that the process has been completed. The progress monitor may also have a text indication of the percentage of the task that has been completed. For example, the progress dialog box may display  
15   "46%" just above the progress bar when the process is almost half completed (see figure 1).

          During the time the progress bar is filling, the host computer is busy transferring data or processing data, which limits the amount of interaction that is allowed for the user. Thus the user can sit and watch for 10 seconds or up to over a  
20   minute. Accordingly, it would be desirable to provide the user with some form of information or entertainment to help pass the time. There is a need for an improved progress monitor.

## **SUMMARY OF THE INVENTION**

The above and other aspects of the present invention are accomplished in a progress monitor that uncovers or reveals information as the progress bar indicates progress instead of just changing colors or shades.

5

## **BRIEF DESCRIPTION OF THE DRAWINGS**

Figure 1 is an image of a computer screen showing a typical progress monitor.

Figure 2 is an image of a computer screen showing a progress monitor that has information being revealed, in accordance with the present invention, as the process progresses.

10

Figure 3 is an image of a computer screen showing a progress monitor that uses angular motion to indicate progress.

## **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT**

15

A progress dialog box or progress monitor can be improved by uncovering or revealing information by the movement of the progress bar, as the process completes (see figure 2). In the preferred embodiment the information that is uncovered is the next line in the text of a story. The program would keep track of which line in the story has been displayed and would increment a counter such that the next line after the line previously displayed in the story would be the line uncovered during the next process. When the entire story has been displayed over multiple processes a new story could be loaded. However, as those skilled in the art will readily appreciate, this invention is not limited by having the information that is uncovered be a line in a story.

20

The information could be anything that a user could find interesting or entertaining. For example, the current price of a stock could be displayed, or a weather report could be displayed. The information could be the punch line of a joke, with the main part of the joke displayed as text in the dialog box. The information  
5 could be the answer to a trivia question, with the trivia question displayed above the progress bar. The information could be a tip on how to use a feature of the software displaying the progress monitor. The information that is uncovered is also not limited to text. The information could be a video or image.

As those skilled in the art will readily appreciate, the process that is monitored  
10 is not limited to a scan. It could be any process that takes time on a computer. For example, when installing software onto a computer, a progress monitor is used to indicate how much of the software has been installed. As those skilled in the art will readily appreciate, the progress bar is not limited in shape to a rectangle. The motion used to indicate progress is not limited to a linear motion. The motion used to  
15 indicate progress could also be an angular motion (see figure 3).

The advantages of this invention is that it gives the user something to do during a process other than just watching the progress monitor fill with a different color or shade. By entertaining or educating the user, the time to complete the process being monitored seems to pass more quickly.

20 A progress bar that reveals text as it changes colors can be created by first defining a rectangle and choosing two colors or shades, for example black and white. The rectangle or progress bar will initially be painted or filled with only one of the colors. As the process being monitored progresses from zero to 100 %, a point along the length of the rectangle corresponding to the amount of progress can be defined.  
25 For example, when the process is 30% complete the position of the point would be

30% along the length of the rectangle. Each time the progress of the process is updated the point would move along the length of the rectangle. The rectangle or progress bar is painted with one color starting at one end of the rectangle up to the position of the point. The other color is used to paint the rectangle from the position of the point to the opposite end of the rectangle. As the point moves from one end of the rectangle to the opposite end the rectangle will change from one color to the other color. The text or information to be revealed will be displayed in the rectangle using the color or shade that initially fills the rectangle. For example, when the rectangle is initially filled with black, the text or information will be displayed in black. When black text is displayed on a black background the text can not be seen. As the color of the rectangle changes from black to white the black text is revealed and made visible. Appendix A contains the code for a program that defines a black and white brush, defines a rectangle, defines an edge in the rectangle that corresponds to the progress of a process, paints the rectangle up to the edge with the white brush, paints the rectangle from the edge to the end with the black brush, and then displays text in the rectangle with the black brush.

A progress monitor does not need to change colors or shades but could instead move a mark or line to indicate the amount of the process that has been completed. Changing colors or shades to indicate the progress is the preferred method.

## CLAIMS

- 1) A progress monitor comprising:
  - 2 a progress area used to indicate the progress of a process being monitored;
  - a progress indicator that divides the progress area into a first part of the
  - 4 progress area and a second part of the progress area, where the first part of the
  - progress area corresponds to the amount of completion of the process being
  - 6 monitored;
  - information, in addition to the progress of the process, visibly displayed in the
  - 8 first part of the progress area.
- 2) The progress monitor of claim 1 where the progress area is a rectangle.
- 3) The progress monitor of claim 1 where the progress area is a half circle.
- 4) The progress monitor of claim 1 where the progress area is a half ellipse.
- 5) The progress area of claim 1 where the first part of the progress area is a first color
- 2 and the second part of the progress area is a second color and the progress indicator is
- defined by the change in color between the first part of the progress area and the
- 4 second part of the progress color.
- 6) The progress monitor of claim 1 where the progress indicator is a line dividing the
- 2 first part of the progress area from the second part of the progress area.

7) The progress monitor of claim 1 where the information being uncovered is the next  
2 line of text in a story.

8) The progress monitor of claim 1 where the motion of the progress indicator is  
2 linear.

9) The progress monitor of claim 1 where the motion of the progress indicator is  
2 angular.

10) A method of reveling information by a progress monitor during the monitoring of  
2 a process comprising the steps of:

- a) defining a progress area;
- 4 b) dividing the progress area into a first part and a second part where the first  
part of the progress area corresponds to the amount of completion of the  
6 process being monitored;
- c) visibly displaying information, in addition to the progress of the process,  
8 in the first part of the progress area;
- d) repeating steps b and c until the process being monitored has been  
10 completed.



[illegible]

5

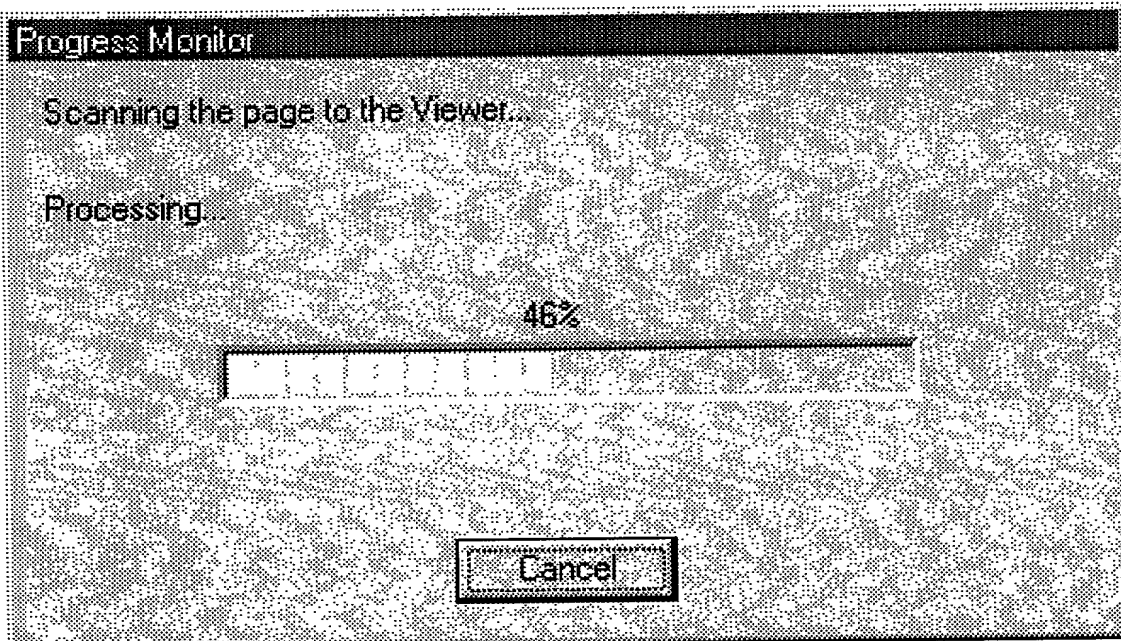


Figure 1

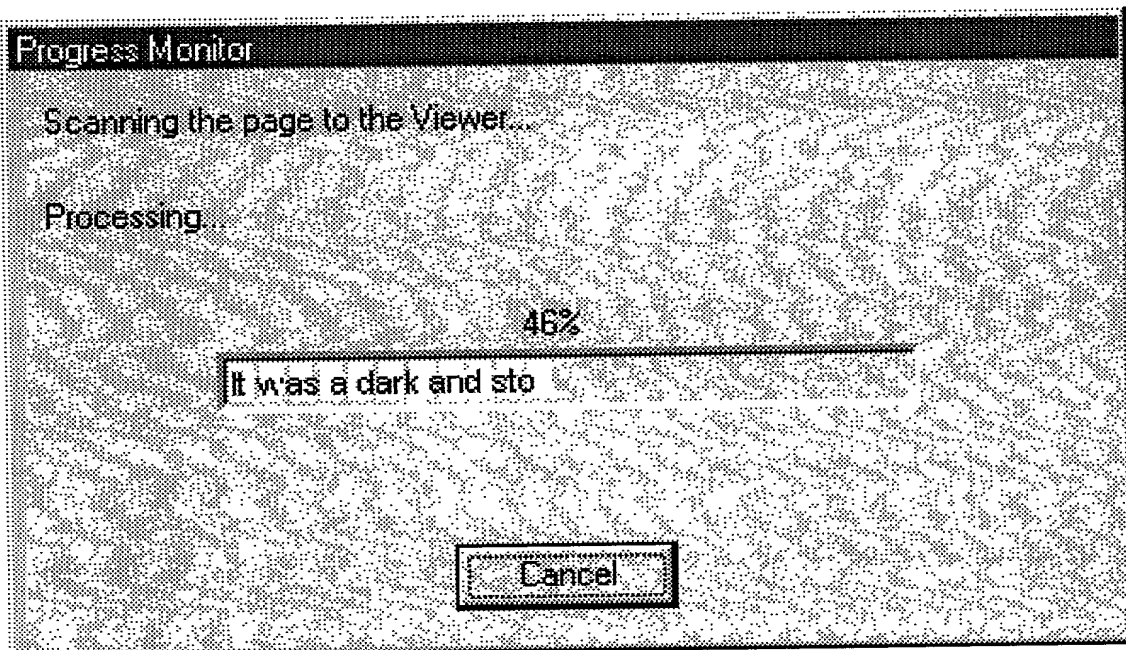


Figure 2

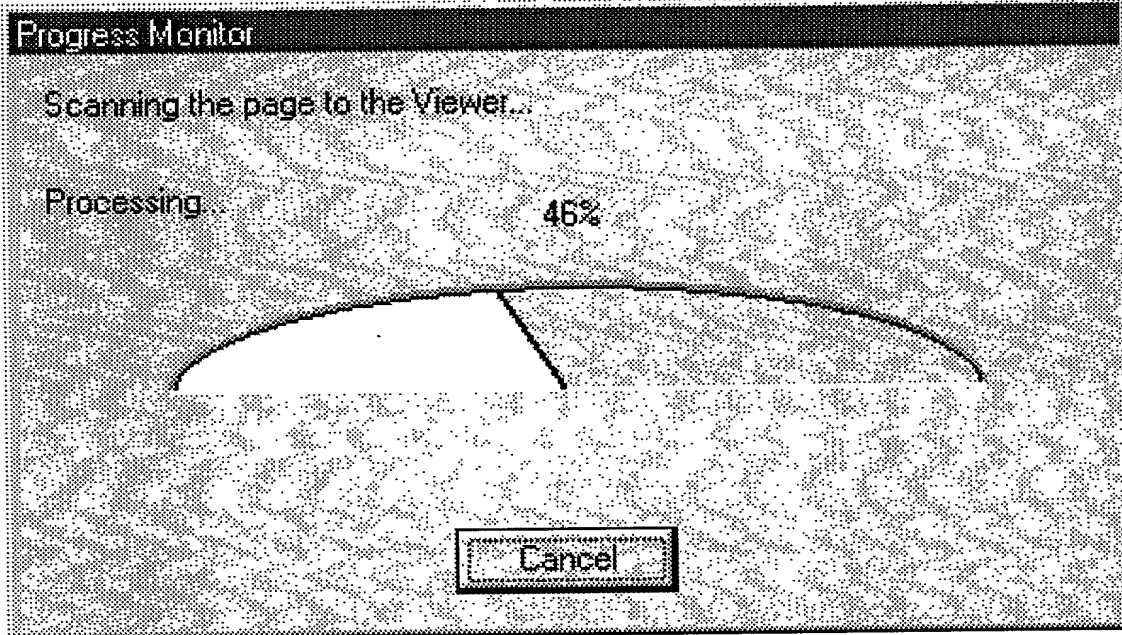


Figure 3

**DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION**
ATTORNEY DOCKET NO. 10980134-1

As a below named inventor, I hereby declare that:

My residence/post office address and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**Method And Apparatus For Improving A Progress Monitor During A Long Computer Process**

the specification of which is attached hereto unless the following box is checked:

( ) was filed on \_\_\_\_\_ as US Application Serial No. or PCT International Application Number \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understood the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.

**Foreign Application(s) and/or Claim of Foreign Priority**

I hereby claim foreign priority benefits under Title 35, United States Code Section 119 of any foreign application(s) for patent or inventor(s) certificate listed below and have also identified below any foreign application for patent or inventor(s) certificate having a filing date before that of the application on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE FILED	PRIORITY CLAIMED UNDER 35 U.S.C. 119
			YES: _____ NO: _____
			YES: _____ NO: _____

**Provisional Application**

I hereby claim the benefit under Title 35, United States Code Section 119(e) of any United States provisional application(s) listed below:

APPLICATION SERIAL NUMBER	FILING DATE

**U. S. Priority Claim**

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NUMBER	FILING DATE	STATUS (patented/pending/abandoned)

**POWER OF ATTORNEY:**

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) listed below to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Jeffery B. Fromm

Guy J. Kelley

Augustus W. Winfield

Steven L. Webb

Reg. No. 30,558

Reg. No. 32,905

Reg. No. 34,046

Reg. No. P44,395

Send Correspondence to:  
IP Administration  
Legal Department, 20BN  
HEWLETT-PACKARD COMPANY  
P.O. Box 10301  
Palo Alto, California 94303-0890

**Direct Telephone Calls To:**

Steven L. Webb  
(970) 898-7745

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Inventor: Steven L WebbCitizenship: USResidence: 1828 Silverleaf Dr Loveland CO 80538Post Office Address: Same as residence

Inventor's Signature

Date

**DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION (continued)**

ATTORNEY DOCKET NO. 10980134-1

Full Name of # 2 joint inventor: Eugene W Pakenham Citizenship: US

Residence: 5243 W 11th #1812 Greeley CO 80634

Post Office Address: Same as residence

Eugene W. Pakenham 01/14/99  
Inventor's Signature Date

Full Name of # 3 joint inventor: Martha A Chavez Citizenship: US

Residence: 435 N Brisbane Ave Greeley CO 80634

Post Office Address: Same as residence

Martha A Chavez 01/15/99  
Inventor's Signature Date

Full Name of # 4 joint inventor: Jeffrey P Lee Citizenship: US

Residence: 1838 43rd Avenue Greeley CO 80634

Post Office Address: Same as residence

Jeffrey P Lee 1-14-99  
Inventor's Signature Date

Full Name of # 5 joint inventor: \_\_\_\_\_ Citizenship: \_\_\_\_\_

Residence: \_\_\_\_\_

Post Office Address: \_\_\_\_\_

\_\_\_\_\_  
Inventor's Signature Date

Full Name of # 6 joint inventor: \_\_\_\_\_ Citizenship: \_\_\_\_\_

Residence: \_\_\_\_\_

Post Office Address: \_\_\_\_\_

\_\_\_\_\_  
Inventor's Signature Date

Full Name of # 7 joint inventor: \_\_\_\_\_ Citizenship: \_\_\_\_\_

Residence: \_\_\_\_\_

Post Office Address: \_\_\_\_\_

\_\_\_\_\_  
Inventor's Signature Date

Full Name of # 8 joint inventor: \_\_\_\_\_ Citizenship: \_\_\_\_\_

Residence: \_\_\_\_\_

Post Office Address: \_\_\_\_\_

\_\_\_\_\_  
Inventor's Signature Date